
Quick Installation Guide

Gateway NMEA2000/J1939



Quick Installation Guide
for
Gateway – NMEA2000/J1939

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Revision  
Revised

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# Document Information

For updated information, please contact your local distributor.

## About this manual

This manual has been published primarily for professionals and qualified personnel.

The user of this material is assumed to have basic knowledge in marine systems, and must be able to carry out related electrical work.

Work on the low-voltage circuit should only be carried out by qualified and experienced personnel.

Installation or work on the shore power equipment *must only* be carried out by electricians authorized to work with such installations.

## Responsibilities

It is the *sole responsibility of the installer* to ensure that the installation work is carried out in a satisfactorily manner, that it is operationally in good order, that the approved material and accessories are used and that the installation meet all applicable rules and regulations.

**Note!** Auto-Maskin continuously upgrades its products and reserves the right to make changes and improvements without prior notice.

All information in this manual is based upon information at the time of printing.

# Introduction

The Auto-Maskin NMEA2000® to J1939 CANbus Gateway is designed to convert Latitude, Longitude, Compass Direction and Vehicle Speed messages on the NMEA2000® network onto the J1939 network.

This unit is designed to operate in a protected marine environment such as an engine room. It is very important that it is installed and set up correctly according to this manual.

Please read the entire manual before starting the installation, and follow the setup instructions carefully to achieve the best results.

- User settable NMEA GPS Device Instance using rotary switch
- Blue LED confirming NMEA GPS data reception
- NMEA2000® interface optically isolated from the J1939 CANbus
- Power drawn only from the NMEA2000® interface
- Panel or DIN-rail mounting option

## Firmware Revisions

The information in this manual corresponds to the gateways firmware revision 1.0.0.

**Note!** The Auto-Maskin Marine Pro engine panels require firmware 2.11 and above to support this gateway.

## Product Features

- Connection to J1939 CANbus network using a 3-pole Wago cage clamp connector
- Green LED confirming valid J1939 CANbus message transmission
- NMEA2000® micro C interface plug
- User settable NMEA Device Instance using rotary switch



# Installation of the Gateway

This chapter covers installation of the Gateway.

## Unpacking the box

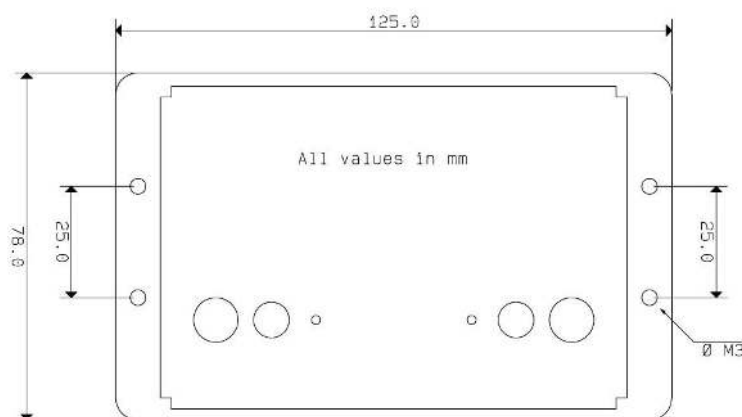
The box shall contain the following material:

- 1x p/n 1121416 Gateway
- 1x DIN-rail mounting kit, with two rail mounts and four countersunk M3 screws for rails
- This manual

## Mounting the unit

The unit can either be mounted to a flat surface using four mounting screws, or to a DIN-rail using the DIN-rail mounting kit that comes in the box.

The unit dimensions and mounting hole locations are shown on the following drawing.



## Connecting the NMEA2000® cable

The unit shall be connected to the NMEA2000® network by the 5-way micro C socket on the front.

Carefully attach the network drop-cable to this plug and hand-tighten until it is fully seated. Take care to match the orientation of the pip inside the socket to the recess inside the drop-cable plug.

The other end of the drop-cable shall be connected to a suitable T-connector on the NMEA2000® network backbone cable.

**Note!** The NMEA2000® bus shall be a 12V, and not a 24V, powered bus!

## Connecting the J1939 CANbus cable

The cables connecting the device to the J1939 CANbus network shall be connected to the Wago Cage Clamp terminal block.



The wire shall be stripped 8 mm and then the cage clamp shall be opened with a small screwdriver in the slot above the wire connection.

Then, simply insert the wire into its connection slot and release the cage clamp by removing the small screwdriver. This will produce a secure gas-tight connection on wire sizes ranging from 0.08 –1.5 mm<sup>2</sup>.

## **J1939 CANbus connections**

The terminal connections are numbered as follows:

| <b>Terminal</b> | <b>Signal</b> |
|-----------------|---------------|
| 1               | CAN H         |
| 2               | Ground        |
| 3               | CAN L         |

These are labeled on the unit case.

# Configuration

The following two items can be configured directly on the Gateway using the two small rotary switches. There are no other menu setups to worry about.

Valid GPS Instances range from “0” through to “F”.

If the Gateway does not receive any data from a GPS device with the selected GPS Device Instance for more than 30 seconds, then it will automatically start transferring all valid GPS data and ignoring the GPS Device Instance.

## NMEA Instance

Each Gateway connected to the NMEA2000® network needs to have a small unique Device **NMEA Instance** Address. If two or more units are connected on the same NMEA2000® network, then make sure each Gateways NMEA Instance is unique, eg. “0” and “1”.

The NMEA Instance of each unit is set by turning the small rotary switch with a small screwdriver.

Valid Device NMEA Instances range from “0” through to “F”.

## GPS Instance

The Gateway connects to the NMEA2000® network and translates messages into the J1939 CANbus network.

To ensure that only the data from *one* GPS device on the NMEA2000® network is forwarded to the J1939 CANbus network, the **GPS Instance** switch has to be set to the same Instance as the **Device Instance** of the GPS device.



# Front Panel Indicators

## Blue LED

The left-hand side blue LED flashes on NMEA2000® transmits, and every 2.5 seconds while receiving valid GPS data.

## Green LED

The right-hand side green LED flashes only on transmission of J1939 CANbus messages, which is every second.

# Maintenance

- Clean the unit with a soft cloth.
- Do not use chemical cleaners as they may remove paint or markings, or may corrode the enclosure or seals.
- Ensure that the unit is mounted securely and cannot be moved relative to the mounting surface. If the unit is loose, tighten the mounting screws.
- Check the security of the cables connected to the NMEA2000® connector and the J1939 CANbus connector, and tighten as necessary.